Amendments to the Claims

The status of the claims is as follows:

1. (Currently Amended) A kit comprising:

a an in solution, negatively charged polynucleotide probe which preferentially hybridizes to a target nucleic acid present in a test sample under a first set of hybridization conditions;

a water soluble, synthetic polycationic polymer in an amount sufficient to increase the association rate of said probe and said target nucleic acid in said sample under said first set of hybridization conditions; and

a dissociating reagent for dissociating said polymer from said probe and said target nucleic acid in said sample.

2. (Original) The kit of claim 1, wherein the cationic monomers comprising said polymer are in molar excess of the phosphate groups of said probe.

3. (Original) The kit of claim 1, wherein said polymer is copolymer.

4. (Original) The kit of claim 1, wherein said polymer is a graft copolymer.

5. (Original) The kit of claim 1, wherein said polymer has a delocalized charge.

6. (Original) The kit of claim 1, wherein said polymer has a weight average molecular weight of less than about 300,000 Da.

7. (Original) The kit of claim 1, wherein said probe includes multiple interacting labels and comprises first and second base regions which hybridize to each other under said first set of hybridization conditions in the absence of said target sequence, wherein said labels interact with each other to produce a first detectable signal when said probe is not hybridized to said target sequence and a second detectable signal when said probe is hybridized to said target sequence, and wherein said first and second signals are detectably different from each other.

8. (Original) The kit of claim 7, wherein said probe includes a third base region which hybridizes to said target sequence under said first set of hybridization conditions, and wherein said third base region is distinct from said first and second base regions or said third base region partially or fully overlaps at least one of said first and second base regions of said probe.

9. (Original) The kit of claim 1, wherein said probe is a polyanion.

10. (Original) The kit of claim 9, wherein said probe further includes at least one of a cationic group and a nonionic group.

11. (Original) The kit of claim 9, wherein the distance between adjacent cationic monomers of said polymer approximates the distance between adjacent phosphate groups of said probe.

12. (Original) The kit of claims 1, where said target sequence comprises RNA.

13. (Original) The kit of claim 12, wherein said RNA is ribosomal RNA.

14. (Original) The kit of claim 12, wherein said RNA is messenger RNA.

15. (Original) The kit of claim 1, wherein said dissociating reagent is at least one of a polyanion or an anionic detergent.

16. (Original) The kit of claim 1 further comprising written instructions for performing an assay to determine the presence or absence of said target sequence in said sample as an indication of the presence or absence of a virus or organism or members of a group of viruses or organisms in said sample.

17. (Original) The kit of claim 16, wherein said written instructions specify hybridization conditions which include a temperature of at least about 40°C and a salt concentration of at least about 5 mM monovalent cations or an equivalent salt concentration containing multivalent cations.

18. (Original) The kit of claim 17, wherein the temperature specified by said written instruction is up to about 60°C.

19. (Original) The kit of claim 16, wherein said written instructions specifiy hybridization conditions which include a temperature of at least about 40°C and a salt concentration of at least about 150 mM monovalent cations or an equivalent salt concentration containing multivalent cations.

20. (Original) The kit of claim 19, wherein the temperature specified by said written instructions is up to about 60°C.

21. (Original) The kit of claim 16, wherein said probe includes a label.

22. (Original) The kit of claim 1 further comprising a capture probe having a base region which stably hybridizes to a base region present in said target nucleic acid under a second set of hybridization conditions, wherein said first and second hybridization conditions may be the same or different, and wherein said capture probe stably hybridizes to said target nucleic acid under said first set of hybridization conditions.

23. (Original) The kit of claim 1 further comprising one or more amplification primers.